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Part V

Environmental Protection Agency

Clean Water Act—Effluent Guidelines Plan; Notice

ENVIRONMENTAL PROTECTION AGENCY

[FRL-4130-6]

Effluent Guidelines Plan

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of proposed effluent guidelines plan.

SUMMARY: Today's notice announces the Agency's proposed plans for developing new and revised effluent guidelines, which regulate industrial discharges to surface waters and to publicly owned treatment works. Section 304(m) of the Clean Water Act requires EPA to publish a biennial-Effluent Guidelines Plan. The Agency requests comment on the proposal and will publish a final plan following the close of the comment period.

DATES: Comments must be received on or before June 8, 1992.

ADDRESSES: Comments should be submitted in writing to: Eric Strassler, Engineering and Analysis Division (WH-552), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. The public record for this notice is available for review in the EPA Headquarters Library, room M2404, 401 M Street, SW., Washington, DC. The EPA public information regulation (40 CFR part 2) provides that a reasonable fee may be charged for copying.

FOR FURTHER INFORMATION CONTACT: Eric Strassler, Engineering and Analysis Division (address above), telephone 202-260-7150.

SUPPLEMENTARY INFORMATION:

I. Legal Authority

Today's Notice is published under the authority of section 304(m) of the Clean Water Act, 33 U.S.C. 1314(m), which provides as follows:

Schedule for Review of Guidelines

(1) Publication.—Within 12 months after the date of the enactment of the Water Quality Act of 1987, and biennially thereafter, the Administrator shall publish in the **Federal Register** a plan which shall—

(A) Establish a schedule for the annual review and revision of promulgated effluent guidelines, in accordance with subsection (b) of this section;

(B) Identify categories of sources discharging toxic or nonconventional pollutants for which guidelines under subsection (b)(2) of this section and section 306 have not previously been published; and

(C) Establish a schedule for promulgation of effluent guidelines for categories identified in subparagraph (B), under which promulgation of such guidelines shall be no later than 4 years after such date of enactment for categories identified in the first published plan or 3 years after the publication of the plan for categories identified in later published plans.

(2) Public Review.—The Administrator shall provide for public review and comment on the plan prior to final publication.

II. Introduction

A. Purpose of Today's Notice

Today's notice announces the Agency's proposed biennial plan pursuant to section 304(m). EPA invites the public to comment on the proposed plan, and following the close of the comment period the Agency will publish a final plan.

B. Overview of Today's Notice

The Agency proposes to develop effluent limitation guidelines and standards ("effluent guidelines") as follows:

1. Continue development of the nine rules listed in the 1990 Effluent Guidelines Plan (55 FR 80, January 2, 1990). These are: Pulp, Paper and Paperboard; Pesticide Chemicals (Manufacturing); Pesticide Chemicals (Formulating and Packaging); Offshore Oil and Gas Extraction; Coastal Oil and Gas Extraction; Organic Chemicals, Plastics and Synthetic Fibers (Remand); Waste Treatment (formerly called Hazardous Waste Treatment), Phase 1; Pharmaceutical Manufacturing; and Metal Products and Machinery (formerly called Machinery Manufacturing and Rebuilding), Phase 1.

2. Develop effluent guidelines for each of the following point source categories: Waste Treatment, Phase 2; Industrial Laundries; Transportation Equipment Cleaning; and Metal Products and Machinery, Phase 2.

3. Conduct approximately two preliminary studies per year to assist in determining whether new or revised rules should be developed for particular categories. Each preliminary study will generally take approximately two years to complete.

4. State development of additional rules (either new or revised). Point source categories will be identified in future biennial Effluent Guidelines Plans. Eight rules would begin on a staggered basis during the years 1996 to 1999 with final action between 2000 and 2003.

III. Effluent Guidelines Program Background

A. Statutory Framework

The Federal Water Pollution Control Act (FWPCA) of 1972 (Pub. L. 92-500, Oct. 18, 1972) (the "Act") established a program to restore and maintain the integrity of the nation's waters. To implement the Act, Congress directed EPA to issue effluent limitation guidelines, pretreatment standards, and new source performance standards for industrial dischargers. These regulations were to be based principally on the degree of effluent reduction attainable through the application of control technologies. The approach includes limitations based on Best Practicable Control Technology (BPT), Best Available Technology Economically Achievable (BAT), New Source Performance Standards (NSPS), Pretreatment Standards for Existing Sources (PSES), and Pretreatment Standards for New Sources (PSNS).

The limitations and standards are implemented in permits issued through the National Pollutant Discharge Elimination System (NPDES) pursuant to section 402 of the Act for point sources discharging directly to the waters of the United States. Although the limitations

are based on the performance capability of particular control technologies, including in some cases in-process controls, dischargers may meet their requirements using whatever combination of control methods they choose, such as manufacturing process or equipment changes, product substitution, and water re-use and recycling. Categorical pretreatment standards are applicable to indirect dischargers—those facilities that discharge into publicly owned treatment works (POTWs).

The 1977 amendments to the FWPCA, known as the Clean Water Act Amendments (Pub. L. 95–217, Dec. 27, 1977) (CWA), added an additional level of control for conventional pollutants such as biochemical oxygen demand (BOD) and total suspended solids (TSS), and stressed additional control of 65 toxic compounds or classes of compounds (from which EPA later developed a list of 126 specific "priority pollutants"). To further strengthen the toxics control program, section 304(e), added by the 1977 amendments, authorized the Administrator to establish management practices to control toxic and hazardous pollutants in plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage.

The effluent guidelines promulgated by EPA reflect the several levels of regulatory stringency specified in the Act, and they also focus on different types of pollutants. Section 301(b)(1)(A) directs the achievement of effluent limitations requiring application of BPT. In general, effluent limitations based on BPT represent the average of the best treatment technology performance for an industrial category. For conventional pollutants listed under section 304(a)(4), section 301(b)(2)(E) directs the achievement of effluent limitations based on the performance of best conventional pollutant control technology (BCT). The Act requires that BCT limitations be established in light of a two-part "cost-reasonableness" test. The test, which assesses the relative costs of conventional pollutant removals, is described in detail in the **Federal Register** notice promulgating the final BCT rule on July 9, 1986 (51 FR 24974).

Both BPT and BCT regulations apply only to direct dischargers, i.e., those facilities that discharge directly into waters of the United States. In general, regulations are not developed to control conventional pollutants discharged by indirect dischargers because the POTWs receiving those wastes normally provide adequate treatment of these types of pollutants or they can be adequately controlled through local pretreatment limits.

For the toxic pollutants listed in section 307(a), and for nonconventional pollutants, sections 301(b)(2) (A), (C), (D) and (F) directed the achievement of effluent limitations requiring application of BAT. Effluent limitations based on BAT are to represent at a minmum the best control technology performance in the industrial category that is technologically and economically achievable.

In addition to limitations for existing direct dischargers, EPA also establishes NSPS under section 306 of the Act, based on the best available demonstrated control technology, processes operating methods or other alternatives. NSPS apply to new direct dischargers. The NSPS limitations are to be as stringent, or more stringent than BAT limitations for existing sources within the industry category or subcategory.

To ensure that effluent guidelines remain current with the state of the industry and with available control technologies, section 304(b) of the Act provides that EPA shall revise the effluent guidelines at least annually if appropriate. In addition, section 301(d) provides that EPA shall review and if appropriate, revise any effluent limitation required by section 301(b)(2).

Section 402 of the CWA provides for the issuance of permits to direct dischargers under NPDES. These permits, which are required by section 301, are issued either by EPA or by a State agency approved to administer the NPDES program. Individual NPDES permits must incorporate applicable technology-based limitations contained in guidelines and standards for the industrial category in question. Where EPA has not promulgated applicable technology-based effluent guidelines for an industry, section 402(a)(1)(B) provides that the permit must incorporate such conditions as the Administrator determines are necessary to carry out the provisions of the Act. In other words, the permit writer uses best professional judgment (BPJ) to establish limitations for the dischargers.

Indirect dischargers are regulated by the general pretreatment regulations (40 CFR part 403), local discharge limits developed pursuant to part 403, and categorical pretreatment standards for new and existing sources (PSNS and PSDES) covering specific industrial categories. These categorical standards under sections 307 (b) and (c) apply to the discharge of pollutants from non-domestic sources which interfere with or pass through POTWs, and are enforced by POTWs or by State or Federal authorities. The categorical pretreatment standards for existing sources covering specific industries are generally analogous to the BAT limitations imposed on direct dischargers. The standards for new sources are generally analogous to NSPS.

B. Components of an Effluent Guideline Regulation

The principal components of effluent guideline regulations are numerical wastewater discharge limitations controlling specified pollutants for a given industry. These are typically concentration-based limits (specified in units such as milligrams or micrograms of pollutant per liter of water) or production-based mass limits (specified in units such as milligrams of pollutant per unit of production). Numerical limits also cover parameters such as pH and temperature.

A guideline often subcategorizes an industry based on differences in raw materials, manufacturing processes, age of plant, characteristics of the wastewaters, and type of product manufactured; in some cases, non-water quality environmental impacts or other appropriate factors that justify the imposition of specialized requirements on the subcategorized facilities are used as a basis. EPA develops a set of effluent limitations for each category or subcategory at each level of control (BPT, BAT, etc.) that is addressed in the guideline.

A guideline also may prescribe Best Management Practices ("BMPs") in addition to or in lieu of numerical limits. BMPs may include, for example, requirements addressing the minimization or prevention of storm water runoff, plant maintenance schedules and requirements addressing the training of plant personnel.

C. Development of Effluent Guideline Regulation

EPA has accumulated substantial experience and expertise in the course of preparing 51 effluent guidelines. The schedules for taking final action on new or revised guidelines that are set out in today's notice reflect EPA's best current estimate of the time necessary to promulgate technically and scientifically adequate regulations for each category. This section of the notice summarizes the various tasks which the Agency typically undertakes in an effluent guideline rulemaking.

EPA begins work on an effluent guideline rulemaking project by

tentatively defining the scope and dimensions of the industry category. The Agency determines the size of the category as it has been defined, using all available sources. Given the diversity of regulatory categories, no single source suffices to establish size. At various times, EPA has used one or more of the following sources: Standard published sources, information available through trade associations, data purchased from the Dun and Bradstreet, Inc. data base, other publicly available data bases, census data, other U.S. Government information, and any available EPA data base. If a category is very large and/or diverse, the Agency will determine whether it can be broken down into appropriate categories or subcategories. If more than one subcategory can be identified, the Agency may need to establish priorities for regulation.

Regulatory information about industry categories is obtained largely through survey questionnaires and on-site wastewater sampling. Survey questionnaires solicit detailed information necessary to assess the statutory rulemaking factors (particularly technological and economic achievability of available controls), water use, production processes, and wastewater treatment and disposal practices. A significant portion of the Agency's questionnaires typically seek information necessary to assess the economic achievability of a prospective regulation.

Generally, the Agency defines its wastewater sampling effort based on information received in response to the questionnaires. While the questionnaire provides information about production processes, water uses and, in general terms, what is found in the industry's wastewater, on-site sampling is required to characterize specifically the pollutants found in discharges. This is because direct dischargers are ordinarily required to do limited, though regular, sampling and selected wastewater analyses under the monitoring provisions of their permits, and few indirect dischargers are required to do any frequent testing. Much of the monitoring data that EPA pursues in developing effluent guidelines pertain to toxic and nonconventional pollutants which are not addressed in existing permits or local pretreatment limits. Moreover, site visits are necessary to assess manufacturing processes, wastewater generation, pollutant control technologies, pollution prevention opportunities (e.g., process changes), and potential non-water quality impacts of effluent guidelines (i.e., air emissions, sludge generation, energy usage).

In developing a list of pollutants of concern for an industry, EPA initially will study wastewater samples for all pollutants that can be measured by recognized analytical methods. Currently over 457 pollutants or analytes can be measured by these methods. This includes the subset of 126 pollutants known as "priority" pollutants developed pursuant to CWA section 307(a). EPA will develop new analytical methods to cover additional pollutants as necessary. For example, the Agency is currently developing new methods to be used in the Pesticides and Pulp and Paper effluent guidelines. (EPA generally proposes any new methods for public comment concurrently with the proposed rule.)

Most of the effluent sampling and analysis that has supported effluent guideline regulations promulgated to date has been conducted by EPA. On occasion, however, these activities have been pursued on a cooperative basis with industry parties. For example, EPA and numerous pulp and paper manufacturers participated in cooperative efforts to sample and analyze effluent, wastewater treatment sludge, and pulp from domestic mills that bleach chemical pulp in their production processes.

EPA conducts engineering and statistical analyses of the technical data to develop control and treatment options for the pollutants of concern , and the projected costs for these options. The Agency considers the costing information and economic data gathered from the survey and other sources in its economic impact analysis, and then selects one or more of the options as the basis for a rulemaking proposal. It also develops assessments of the environmental impact of the industry discharges, and may conduct a regulatory impact analysis as well.

D. NRDC Litigation and Consent Decree

In 1989, Natural Resources Defense Council, Inc. (NRDC) and Public Citizen, Inc. filed suit in U.S. District Court for the District of Columbia (*NRDC et al* v. *Reilly*, Civ. No. 89-2980) alleging that EPA failed to comply with its obligations under section 304(m). Plaintiffs' amended complaint, filed January 19, 1990, charged that EPA's 1990 plan did not meet the requirements of section 304(m) because it failed to list all categories discharging toxic or nonconventional pollutants and failed to commit to publish new regulations by the February, 1991 deadline. On April 23, 1991, U.S. District Court Judge Royce Lamberth issued a memorandum opinion granting plaintiff's motion for partial summary judgment and stating that EPA had violated section 304(m). The Court did not order a remedy, but advised the parties to attempt a settlement.

EPA and plaintiffs negotiated a Consent Decree that was entered by Judge Lamberth on January 31, 1992. The Decree commits EPA to schedules for proposing and taking final action on:

- Seven of the nine effluent guidelines already under development (see Section IV.A below);
- Four identified effluent guidelines on which work has not yet begun (see Section IV.C below); and
- Eight effluent guidelines the identity of which will be determined by EPA at a later time (see Section IV.E below).

In general, EPA is required to start two guidelines per year throughout the 1990's, with deadlines for final action on each rule between four and five years after work has begun. Under the Decree, EPA retains the discretion to select guidelines for development based on Agency priorities.

The Decree also requires EPA to conduct preliminary studies of eleven industries to determine whether effluent guidelines would be appropriate (see Section IV.D below). Results of these studies would be used in selecting industries for future regulations. Of the eleven industries to be studied, eight are specifically identified in the Decree, although EPA may substitute alternative industries for those named. The Decree requires EPA to commence two such studies per year in each of 1992, 1993, 1994 and 1995, and commence three such studies in 1996.

The Decree requires EPA to propose and take final action on at least twelve effluent guidelines, in addition to those currently under development, by December 31, 2003, unless the results of the eleven preliminary studies described above plus the results of seven studies the Agency has already completed fail to indicate twelve industries for which effluent guidelines would be appropriate. In such event, EPA would be required to conduct additional studies.

The Decree requires EPA to establish a special task force composed of representatives from EPA regional offices, State and local governments, industry, citizen groups and the scientific community to advise the Agency with respect to:

- A process for expediting the promulgation of effluent guidelines;
- A process for deciding which additional point source categories to regulate by means of effluent guidelines,

based on potential for risk reduction, the utility of regulation and the schedule for promulgation of such rules;

- A process and schedule for reviewing and determining whether to revise additional existing effluent guidelines;
- New technologies and control methods, including methods to achieve zero discharge;
- The minimum components of new and revised effluent guidelines to ensure that they are adequate in scope and coverage;
- Minimum requirements for surveys under section 308 of the Act; and
- A process for promoting effective co-regulation of point source categories to eliminate or minimize cross-media transfer of pollution.

The Decree sets certain deadlines with respect to the publication of this plan. The Decree also provides that future section 304(m) plans consistent with its terms shall satisfy EPA's obligations under section 304(m) with respect to the publication such plans.

Other provisions of the Decree provide for modification for good cause, set forth procedures for seeking modifications, grant automatic stays of deadline in certain circumstances, and that the Decree is subject to other applicable law (including appropriations law).

IV. Today's Proposed Effluent Guidelines Plan

A. Effluent Guidelines Currently Under Development

1. Schedule for Ongoing Rulemaking

The Agency is currently in the process of developing new or revised effluent guidelines for nine categories. (These nine categories are the same ones identified in the Agency's 1990 Effluent Guidelines Plan.) The categories and actual or projected dates for proposal and final action are set forth in Table 1.

TABLE 1.—EFFLUENT GUIDELINES CURRENTLY UNDER DEVELOPMENT

Category	Proposal	Final action
Offshore Oil and Gas Extraction [1]	11/26/90 & 3/13/91	
Organic Chemicals, Plastics and Synthetic Fibers (Remand issues)	12/6/91	5/93
Pesticide Chemicals (Manufacturing) [2]	4/10/92	7/93
Pulp, Paper and Paperboard [3]	10/93	9/95
Pesticide Chemicals (Formulating and Packaging) [2]	1/94	8/95
Waste Treatment (Phase 1) [4]	4/94	1/96
Pharmaceutical Manufacturing	8/94	2/96
Metal Products and Machinery [5] (Phase 1)	11/94	5/96
Coastal Oil and Gas Extraction	1/95	7/96

[1] The Offshore Oil and Gas Extraction rulemaking is not covered under the January 31, 1992 Consent Decree. The deadline for final action is currently subject to negotiation in *NRDC v. Thomas* (D.D.C. No. 79-3442).

[2] The 1990 Plan listed the Pestcide Chemicals category as a single rulemaking project. EPA subsequently divided the project into two rulemakings, one covering manufacturing activities and a second covering formulating and packaging.

[3] The Pulp, Paper and Paperboard rulemaking is not covered under the January 31, 1992 Consent Decree. Deadlines are subject a Consent Decree in *EDF v. Thomas* (D.D.C. No. 85-0973).

[4] New title for Hazardous Waste Treatment category. See disucssion in Section IV.A.2 below.

[5] New title for Machinery Manufacturing and Rebuilding category. See discussion in Section IV.A.2 below.

EPA will include any updates to these schedules in the semi-annual Regulatory Agenda published in the **Federal Register.**

2. Title Changes for Categories

A. *Metal Products and Machinery.* EPA is changing the title of the Machinery Manufacturing and Rebuilding category to "Metal Products and Machinery" (MP&M). No change in the coverage of this category will accompany the name change. This objective of this change is to clarify the coverage of the category.

In 1990 and 1991, the Agency distributed survey questionnaires (labeled "Machinery Manufacturing and Rebuilding") to the industry. As described in the 1990 Effluent Guidelines Plan, the category covers facilities that generate wastewater while processing metal parts, metal products, and machinery, including manufacture and assembly, rebuilding, repair, and maintenance. Some industry respondents found the label confusing, and interpreted the questionnaires to apply only to machinery facilities. The new title, "Metal Products and Machinery", better describes the coverage of the category.

b. *Waste treatment.* EPA has changed the title of the Hazardous Waste Treatment category to "Waste Treatment." No change in the coverage of this category accompanies the name change. The new title more accurately reflects the scope of the rulmaking. Facilities that treat both hazardous and non-hazardous wastes are included in the category.

B. Process for Selection of New Effluent Guideline Regulations

In selecting new industrial categories for the development of effluent guidelines, the Agency applied a range of criteria to available data. This process is described below.

1. Evaluation Criteria

EPA, in preparing today's proposed plan, looked at two broad factors in selecting industries for the development of effluent guidelines. These factors are, first, the risk to human health and the environment associated with the wastewater discharges from those industries and, second, the utility or usefulness of new or revised guidelines to permitting authorities and POTWs.

In assessing risk to human health and the environment, EPA looked to discharges of toxic and nonconventional pollutants and other indicators of environmental concern. Specifically, EPA looked at the following:

- Total priority pollutants discharged (lbs/day)
- Total pollutants discharged (lbs/day)
- Total priority toxic pounds-equivalent discharged (lbs/day)
- Number of carcinogens present in discharges
- Number of facilities discharging to water quality-impaired receiving waters
- Number of documented cases of sediment contamination

These criteria provide a means to assess a category's relative risk to human health and the environment. The Toxic Pounds-Equivalent factors (developed for most of the 126 priority polllutants) were calculated using the mass loading of a pollutant (measured in pounds), multiplied by a weighting factor for each pollutant based on toxicity. The individual values were then summed to provide the category value. The pounds-equivalent measures, along with the "number of carcinogens present in discharges", relfect in the aggregate the degree to which an industry effluent could affect aquatic life and human health. (EPA uses the list of priority pollutants as a tool to compare discharges because more data are available across varous industries on these pollutants. However, effluent guidelines, as described in Section III.C above, may include limitations on any toxic or nonconventional pollutants in addition to the 126 priority pollutants.) The "number of facilities dischaging to water quality-impaired receiving waters" provides an approximation of a

category's impact on water quality by identifying the facilities whose receiving waters are not expected to achieve applicable water quality standards after application of current BAT effluent limits. The "documented cases of sediment contamination" indicate the potential impacts of an industry's discharges on aquatic ecosystems and the degraded quality of the overlying water to the extent that water quality criteria are exceeded and that uses of the water—by both aquatic life and humans—are impaired.

The second broad factor EPA used in selecting industies for development of effluent guidelines was the "utility" or "usefulness" of the regulation. This factor reflects the fact that, even in the absence of a national effluent guideline, a discharger of pollutants into waters of the United States must obtain an NPDES permit and that permit must incorporate economically achievable technology-based effluent limits. Permit writers at facilities not covered by national guidelines are directed to use Best Professional Judgment in determining what technology-based limits are appropriate. (A roughly analogous situation exists with respect to the development of "local limits" for those facilities discharging into POTWs). At some facilities, however, development of BPJ permits by individual permit writers may be especially difficult due to the complexity of wastestreams, presence of pollutants with poorly understood treatability characteristics, or other factors. National effluent guidelines may be especially appropriate for such facilities and the categories of which they are a part. Promulgation of new and revised categorical pretreatment standards was the first recommendation of a recent study of EPA's Pretreatment Program (National Pretreatment Program—Report to Congress, EPA 21W-4004, July 1991).

In assessing the utility or usefulness of a national effluent guideline, EPA looked at a variety of factors. Among these were:

- Average priority pollutants discharged per facility;
- Average priority toxic pounds-equivalent discharged per facility;
- Number of discharging facilities;
- Cost of existing or additional controls.

The number of priority pollutants discharged per facility and the toxic pounds-equivalent levels were evaluated as relative indicators of plant complexity. The number of discharging facilities accounted for the greater impact of a guideline on a large-population category, in reducting permit writing workload and implementing permit limitations on a timely basis.

These criteria are groups of factors that the Agency has considered and weighed in setting rulemaking priorities. The criteria cannot be applied mechanically. In applying the criteria and selecting categories of dischargers for the preparation of new or revised guidelines, the Agency has used considerable judgment grounded in its expertise in the regulation of the discharge of pollutants and the administration of the Clean Water Act and other authorities that address pollution of the nation's waters.

The criteria that EPA used for today's proposed plan are subject to revision in future Effluent Guidelines Plans. The Agency will be consulting with the new task force on the evaluation process and welcomes public comment on the process.

2. Data Sources

The Agency uses all available information and data for the purpose of setting rulemaking priorities. For example, in the preliminary study of an industry, the Agency will rely on selective on-site wastewater sampling, data from NPDES and other regulatory programs (such as EPA's Toxic Release Inventory and other Federal and State programs), data provided by industry associations and individual companies, and other sources such as research studies, professional journals and other literature. In setting priorities, EPA generally will not administer a full-scale questionnaire survey or a comprehensive sampling and analysis program (as it would when obtaining information for full-scale rulemaking) because of the time and expense involved.

a. *Preliminary industry studies.* The purpose of a preliminary study is to indicate whether and to what extent an industry discharges toxic and nonconventional pollutants, and to provide a basis for comparison with other industries for purposes of assigning priorities for regulation. These objectives can be met by combining the findings of selected on-site sampling with other descriptive information about the industry.

The results of a Preliminary Study for an industry are published in a "Preliminary Data Summary." The Preliminary Data Summary presents a synopsis of recent technical and economic information on a category of dischargers for use by EPA staff and management. The Preliminary Data Summaries are not used directly as a basis for rulemaking, but are used in the Agency's determination of which categories most require preparation of new or revised effluent guidelines. (They also may be expanded to become guidance documents for NPDES permit writers and POTWs.)

A Preliminary Study typically collects data on the following:

- The products manufactured and/or services provided by an industry;
- Number, types and geographic location of facilities;
- Destination of discharges (directly to surface waters, indirectly to POTWs, or both);
- Characterization of the wastewater discharges and identification of pollutants present in the wastestreams (e.g., mean concentrations of pollutants, wastewater volumes, mass loadings);
- Sampling and analytical methods employed to ascertain the presence and concentration of pollutants in the wastewater;
- Pollution control technologies in use and potentially applicable to the industry;
- Non-water quality environmental impacts associated with wastewater treatment in the industry (e.g., air emissions, wastewater treatment sludges, and other wastes including hazardous wastes);
- Cost of control technologies in place and cost estimates for additional controls;
- Cost-effectiveness of reduction of toxic and nonconventional pollutants;
- Estimates of water quality impacts of discharges within the subject industry;
- Economic assessment (current financial condition of firms in the industry, industry expansion or reduction trends, size characterization of firms, impact of estimated treatment costs on representative facilities, estimated cost-effectiveness of additional wastewater treatment technologies).

The type and quality of information varies among the Preliminary Data Summaries, depending on the data available to the Agency when each document is prepared and whether the industry is covered by an existing effluent guideline. For example, some of the current Summaries have comprehensive, primary data on the number and location of the discharging facilities while others contain estimates drawn from secondary data sources. However, the Summaries represent the Agency's best characterization of industries at the time the summaries are compiled. As additional data are acquired, they are factored into the evaluation process. Consequently, the Preliminary Data Summaries are also

subject to revision. The Agency has made the Summaries available to the public and intends to continue to do so.

EPA has conducted studies of the following seven industries for which effluent guidelines are not currently under development. These are: Drum Reconditioning; Hospitals; Industrial Laundries; Paint Formulating; Solvent Recycling; Transportation Equipment Cleaning; and Used Oil Reclamation and Re-Refining.

The results of the studies were discussed in the January 2, 1990 Effluent Guidelines Plan. EPA has not completed any additional studies since that time, but will complete several studies in the next few years, as described in Section IV.D below

b. *Toxic release inventory.* The Toxic Release Inventory (TRI) is an Agency program mandated by section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (Pub. L. 99-499, 42 U.S.C. 11023), also known as Title III of the Superfund Amendments and Reauthorization Act. It is one source of information the Agency now has available to identify facilities that may discharge toxic chemicals to surface waters or to POTWs. Information for the TRI is reported by a facility if it meets specified criteria on the size and type of facility and on amount and uses of TRI-listed chemicals. A facility must report if it meets all of the following criteria: it is a manufacturing facility (Standard Industrial Classification [SIC] major groups 20 through 39); it employs ten or more people; and it manufactures, imports, processes or otherwise uses TRI listed chemicals above specified threshold amounts. The TRI reports amounts of 302 different toxic chemicals and 20 broadly-defined chemical categories—which can include many individual chemicals—released by facilities directly to the environment or transported to off-site locations. For 1990, the most recent year for which TRI data are available, facilities, were required to report to EPA by July, 1991. These data are now available for public review and are used by the Agency in determining areas which may require further study or data acquisition. (When EPA was preparing today's proposed Effluent Guidelines Plan in 1991, it reviewed the TRI data available at the time, which was for 1989.)

The TRI database is a useful, albeit limited, tool for comparing industrial wastewater discharges. The data do not directly gauge the extent to which humans or the environment are exposed or at risk. Moreover, the data do not provide comprehensive release data for industry because the reporting thresholds exempt some facilities. The accuracy of the industry totals is also limited because most of the individual facility reports are based on estimates submitted by the respondents.

EPA anticipates that it will be able to expand its use of TRI data, however, as the quality of respondents' estimates improve and the reporting coverage is expanded. Increasing the system's coverage of industries and chemicals, and lowering of reporting thresholds, would provide a broader means of comparing industry discharges.

c. *Other data sources—Consultation between EPA Offices and with States and POTWs.* The experience of people who implement the Agency's water pollution control programs is an important source of information relevant to setting regulatory priorities. State permit authorities, as well as EPA regional offices, are responsible for translating effluent guidelines into limits in NPDES permits issued to individual dischargers, and for enforcing these limits. POTWs share responsibility for implementing categorical pretreatment standards and set local limits. These authorities have a good working knowledge of the existing guidelines and standards, of technological and economic factors that affect limits and of industrial categories for which new or better limits are needed.

EPA routinely meets with States and POTWs in several contexts. These include informal discussions, technical workshops, development of program guidance, and development of technical assistance and field support for permit writers and municipal operators of POTW pretreatment programs. While these meetings are held to enhance the ability and capacity of permit writers and municipal authorities, they also provide information to assist in the selection of particular industries as potential candidates for new or revised guidelines and standards because of identified problems.

The implementation of CWA section 304(l), enacted in the Water Quality Act of 1987, provided some new information on water quality cross-referenced by industrial category, that EPA used in the effluent guidelines planning process. Pursuant to sections 304(l)(1) (B) and (C), the Agency developed a list of dischargers to receiving waters with impaired water quality. These facilities were identified by States as those whose receiving waters are not expected to achieve applicable water quality standards after application of technology-based effluent limits. See the Final Rule on the Surface Water Toxics Control Program, 54 FR 23868 (June 2, 1989).

Sediment Quality Report. EPA compiled an overview of sediment quality in waters of the United States in 1987. The report focused on qualitative description of the nature and extent of contaminated sediments (bottom deposits in rivers, lakes, harbors and oceans that have been polluted with heavy metals, organic chemicals and other materials from anthropogenic sources). In some instances the report identified specific point sources, providing additional water quality information on some industry categories, to supplement the section 304(l) information described above.

Effluent Guidelines Rulemaking Records. In estimating the relative merit of revising several existing guidelines, EPA reviewed the rulemaking records it compiled for these categories at promulgation. The Development Document that the Agency prepared for each rule summarized the industry's discharges, treatment technologies and costs. For some of the categories that EPA considered in preparing today's proposed plan, the Development Documents continue to offer the most comprehensive description of an industry's wastewater characteristics. This is particularly so for industries not currently covered by the TRI reporting system described above.

Public Comments. In the 1990 Effluent Guidelines Plan, EPA invited public comment on issues relating to the next biennial plan and future plans under section 304(m). The Agency received several comment letters in response to this request. EPA will consider these comments in preparing the final 1992 plan and will provide responses, as appropriate, in that document.

3. Application of Criteria to Data Sources for Today's Notice

In preparing today's notice, EPA reviewed available data on 18 industries and evaluated them according to the criteria described above. The industries are listed below in Table 2. This list includes the eight industries identified by EPA in the 1990 Effluent Guidelines Plan as potential "Priority Industries" for which effluent guidelines are not currently under development (55 FR 92).

Table 2. Industries Evaluated by EPA for Development of Effluent Guidelines

[in alphabetical order]

Coal Mining
Drum Reconditioning [1]

[1] Originally identified in 1990 Effluent Guidelines Plan.

Hospitals [1]
Industrial Laundries [1]
Inorganic Chemicals
Iron and Steel
Leather Tanning
Metal Finishing
Metal Products and Machinery (formerly called Machinery Manufacturing and Rebuilding), Phase 2
Oil & Gas Extracting (Onshore and Stripper Subcategories) [1]
Organic Chemicals, Plastics and Synthetic Fibers
Paint Formulating [1]
Petroleum Refining
Solvent Recycling [1]
Textile Mills
Transportation Equipment Cleaning [1]
Used Oil Reclamation and Re-Refining [1]
Waste Treatment (formerly called Hazardous Waste Treatment), Phase 2

There are numerous additional categories of dischargers of toxic or nonconventional pollutants that the Agency has considered in preparing today's notice but that are not among the categories that EPA evaluated, even though they might ultimately merit listing under section 304(m) for the preparation of new or revised guidelines. In general, EPA had data for these categories indicating that they discharge lower quantities of toxic or nonconventional pollutants than the 18 reviewed categories, or EPA had less reliable data or no data concerning the presence or quantity of toxic or nonconventional pollutants in their waste streams. In preparing future biennial plans under section 304(m), EPA may review and reevaluate additional categories that discharge toxic or nonconventional pollutants, but that are not among the priority categories listed in today's notice. EPA will then collect additional data, as appropriate, and will determine which of these categories merit priority for inclusion in future biennial 304(m) plans.

The Agency was not able to obtain comparable data on each criterion for each category, and estimated some factors to develop the overall evaluations.

C. Proposed Categories to be Regulated

Based on the process described in Section IV.B above, as well as the requirements of the Consent Decree described above, the Agency determined to develop effluent guidelines for four new categories. Existing documentation on these categories, described below, indicate that these industries discharge relatively high loadings of toxic and nonconventional pollutants, often have little or no treatment systems in place, and are difficult to regulate through case-by-case permits and pretreatment standards.

The raw waste loads described below are preliminary estimates and may not reflect the current amounts of waste being discharged. In developing the rulemaking records EPA will collect new data on these industries to characterize existing treatment-in-place.

1. Waste Treatment, Phase 2

The first additional industrial category EPA proposes to regulate with national effluent guidelines is Waste Treatment, Phase 2. EPA is currently developing effluent guidelines for a portion of the Waste Treatment (WT) industry. This first set of guidelines, labelled "Hazardous Waste Treatment, Phase 1" in the 1990 Effluent Guidelines Plan, will cover centralized waste treatment facilities. EPA now proposes to develop, in addition, effluent guidelines covering the incinerator and landfill portions of the industry.

This decision is based on an EPA study of the WT industry in 1986 and 1987, the results of which are summarized in a 1989 Preliminary Data Summary (Preliminary Data Summary for the Hazardous Waste Treatment Industry, EPA 440/1–89/100, 1989). EPA estimates that leachate from municipal and hazardous waste landfills generates 21 million pounds of priority pollutants in raw wastewaters annually, and perhaps as much as 5 times that amount in non-priority hazardous and toxic pollutants. Leachates from landfills were found to contain high concentrations of toxic organic, metal, conventional and nonconventional pollutants. Scrubber water from incinerators is estimated to contain 19.7 million pounds of toxic and nonconventional pollutants annually (raw waste load), and is known to contain high concentrations of metals.

In the course of developing the Phase 1 rule, EPA has begun collecting data on Phase 2 facilities. The Agency intends to propose a rule for Waste Treatment, Phase 2 in 1995, and take final action in 1997.

2. Industrial Laundries

The second additional industrial category EPA proposes to regulate with national effluent guidelines is Industrial Laundries. Industrial laundries supply laundered and dry-cleaned work uniforms, wiping towels, safety equipment (such as gloves and flame-resistant clothing), dust covers and cloths, and similar items to industrial and commercial users. Currently no national guidelines apply to this category.

In 1986, EPA published its Domestic Sewage Study (DSS)(Report to Congress on the Discharge of Hazardous Wastes to Publicly Owned Treatment Works, EPA–503/SW–86–004, February 1986) which identified industrial laundries as potentially contributing large amounts of hazardous wastes to POTWs. EPA described industrial laundry discharges in the DSS and conducted a follow-up study which was published as a Preliminary Data Summary (Preliminary Data Summary for Industrial Laundries, EPA 440/1–89/103, 1989).

Approximately 1,000 facilities, virtually all of them indirect dischargers, accept items for laundering which contain a wide range of toxic and nonconventional pollutants. EPA has estimated the priority and nonconventional pollutant loadings from this category to be approximately 34 million pounds annually. The discharge of these pollutants into sewage systems, especially solvents from shop towels, potentially affects POTW operations and discharges to receiving waters. Relative to other categories, it is difficult to develop POTW local limits for this category because of the number and concentration of pollutants discharged and the need for additional wastewater treatability data. The Agency believes that the economic impacts of some regulatory options on this category may be relatively high, because many facilities are small businesses.

The Agency intends to propose a rule for this category in 1996, and take final action in 1998.

3. Transportation Equipment Cleaning

The third additional industrial category EPA proposes to regulate with national effluent guidelines is Transportation Equipment Cleaning. The industry performs cleaning services on transportation equipment such as tank trucks, railroad tank cars, tank barges, and aircraft exteriors. Facilities that fit within this category are often part of other industrial enterprises. Many of these facilities are indirect dischargers or combine their wastewater with that of other facilities prior to treatment. Currently no national guidelines apply to this category.

EPA described the industry's discharges in the DSS and a Preliminary Data Summary (Preliminary Data Summary for Transportation Equipment Cleaning, EPA 440/1–89/104, 1989). Based on limited sampling data, the priority and nonconventional pollutant loadings for this category are estimated to be in the range of 51 million pounds annually. The Agency found high levels of conventional, toxic, and

nonconventional pollutants in raw and treated wastewaters being discharged at several facilities that were sampled for the DSS. These pollutants often are derived from small residual quantities ("heels") of pure chemical products which remain in tanks that are cleaned at the facilities. Some of these chemical products (inorganic and organic acids and caustics, petroleum products, and other bulk products) are hazardous materials. Moreover, these tanks typically are cleaned with highly caustic solutions. Many facilities lack any treatment in place.

The Agency has estimated that there are about 700 facilities devoted to the cleaning of tank trucks, rail tank cars, and tank barges. There are estimated to be 1,400 facilities that clean commercial aircraft exteriors. Transportation Equipment Cleaning facilities and the wastewater that they discharge are relatively difficult to characterize for regulatory purposes due to the diversity of their operations. The difficulty of characterizing the discharges, in addition to the variable nature of the discharges (*i.e.*, types of pollutants, concentrations, wastewater flows) complicates the development of NPDES permits and local pretreatment limits.

The Agency intends to propose a rule for this category in 1996, and take final action in 1998.

4. Metal Products and Machinery, Phase 2

The fourth additional industrial category EPA proposes to regulate with national effluent guidelines is a broad category known as "Metal Products and Machinery, Phase 2." (The category was formerly called "Machinery Manufacturing and Rebuilding, Phase 2." See the discussion on the new category title in Section IV.A.2 above). The MP&M category covers about 970,000 facilities that generate wastewater while processing metal parts, metal products and machinery, including manufacture and assembly, rebuilding, repair and maintenance. This category includes 15 major industrial groups with similar wastewater characteristics. Given the great diversity in the production and economic aspects of the facilities, EPA decided to develop the guidelines in two phases. In the 1990 Effluent Guidelines Plan, the Agency announced that it would develop a Phase 1 guideline covering 7 of the 15 groups of facilities.

EPA today announces that it will develop a Phase 2 guideline covering the eight remaining groups: Bus and Truck; Household Equipment; Instruments (Measurement and Control Instruments, and Specialty Equipment); Motor Vehicles (Automobiles); Office Machines; Precious and Nonprecious Metals; Railroad; and Ships and Boats. The current Phase 2 population is estimated at 775,000 facilities.

The Domestic Sewage Study reported that facilites in the MP&M category, as a group, are the largest contributor of toxic organic pollutants to POTWs. Subsequent studies confirm that these facilities are major generators of both organic and toxic metal pollutants. EPA estimates that the category's annual pollutant loadings approximate 150 million pounds of toxic metals and 36.3 million pounds of toxic organic pollutants (including cyanide). These pollutant loading estimates are based on data representing over 278,000 facilities with more than nine employees. Current data indicate that about 10 percent of the facilities are direct dischargers and 70 percent discharge to POTWs. (The remaining 20 percent either do not generate process wastewater or use alternative wastewater disposal methods.)

The Phase 2 rule will be proposed in 1997 and EPA will take final action in 1999.

D. Preliminary Studies

Pursuant to the requirements of the Consent Decree, EPA has begun Preliminary Studies of the Metal Finishing and Petroleum Refining industries during 1992. The scope of EPA's Preliminary Studies, which assist the Agency in determining whether to develop new or revised effluent guidelines for an industry, is discussed in Section IV.B.2 of today's Notice.

1. Metal Finishing

The Metal Finishing category encompasses 46 unit operations (i.e. metal working processes or procedures) involved in the machining, fabrication and finishing of products primarily associated with SIC groups 34 through 39. The effluent limitations for this category (found at 40 CFR part 433) are based on a common end-of-pipe treatment technology. The category is subject to identical BPT, BAT, NSPS, PSES and PSNS limits, with the exception of cadmium, oil & grease, TSS, and pH. In the case of cadmium, the new source standards are more stringent than existing source limitations; and, in the case of oil and grease, TSS, and pH, only BPT limitations were promulgated.

EPA is currently in the process of reviewing the Metal Finishing guidelines for potential revisions. The Agency is also currently reviewing existing Metal Finishing information and comparing related data for the same 46 unit operations within the Metal Products and Machinery industry.

2. Petroleum Refining

EPA is currently in the process of reviewing and gathering data on the Petroleum Refining industry to determine whether revisions to the existing regulation (40 CFR part 419) are warranted. Information is being collected on refinery water use and the level of certain analytes, including the concentrations of specific priority pollutants in refinery discharges. The Agency will consider whether pollutants not limited in the current BAT guideline should be included in a revised regulation. The basis for computing water use to calculate the existing BPT, BAT and NSPS production-based limitations will be examined. EPA is also reviewing recent data on information of dioxins and furans in some refinery waterstreams.

3. Future Studies

In the NRDC Consent Decree (see Section III.D of today's Notice), EPA committee to begin two Preliminary Studies in each of 1993, 1994 and 1995, and begin three preliminary studies in 1996. Six industries (all which are currently subject to effluent guidelines) were tentatively identified in the Consent Decree as the subject of studies. These are Iron and Steel Manufacturing (40 CFR part 420), Inorganic Chemicals (40 CFR part 415), Leather Tanning (40 CFR part 425), Coal Mining (40 CFR part 434), Onshore/Stripper Oil and Gas Extraction (40 CFR part 435), and Textile Mills (40 CFR part 410). Other industries, identified through review of new information made available to the Agency, may be studied. Each Preliminary Study would take approximately two years to complete. Updated information on industry studies will be included in the next bienniel Effluent Guidelines Plan.

E. Additional Effluent Guidelines

In the NRDC Consent Decree, EPA committed to schedules for the development of eight additional effluent guidelines beyond the four new rulemaking projects described above in section IV.C. The Agency has not yet determined the categories to be covered by these additional guidelines. Those determinations will be made following review of Preliminary Data Summaries, public comments and other available data, and will be announced in

subsequent Effluent Guidelines Plans published in the **Federal Register**. These guidelines will be proposed between 1998 and 2001, with final action between 2000 and 2003.

V. Request for Comments

EPA invites public comment on its plans for development of effluent guidelines and industry studies. Comments will be accepted until June 8, 1992. In particular, the Agency is interested in data that would facilitate category-wide comparisons of industries with regard to discharge characteristics, treatment practices and effects on water quality. In addition to the industries discussed or listed in today's notice, EPA will consider information on other industries in developing Effluent Guidelines Plans.

VI. Economic Impact Assessment; OMB Review

Today's notice proposes a plan for the review and revision of existing effluent guidelines and for the selection of priority industries for new regulations. This notice does not establish any requirements; therefore, no economic impact assessment has been prepared. EPA will provide economic impact analyses or regulatory impact analyses, as appropriate, for all of the future effluent guideline rulemakings developed by the Agency.

EPA reserves the discretion to decide not to proceed with any one or more effluent guidelines where the Administrator determines, pursuant any discretion the Administrator has under the Act, or any other legal authority, that an effluent guideline is not appropriate for the point source category under consideration. In EPA's view, such discretion includes the discretion not to proceed with an effluent guideline on the basis of cost considerations, as well as the discretion not to proceed with an effluent guideline where the Administrator determines (taking into account the range of environmental issues confronting the Agency) that promulgating the guideline would not have the potential to significantly reduce the risk to human health or the environment, or that another approach would accomplish a comparable reduction in risk.

Today's notice has been reviewed by the Office of Management and Budget under Executive Order 12291.

Dated: April 30, 1992.

William K. Reilly,

Administrator.

Appendix A—Promulgated Effluent Guidelines

["Promulgation" refers to the date of promulgation or the most recent amendment.]

Category	40 CFR part	Promulgation	Revised rule (P: proposal F: final action) or study completion (S)
Aluminum Forming	467	12/27/88	
Asbestos Manufacturing	427	4/25/75	
Battery Manufacturing	461	8/28/86	
Builder's Paper and Board Mills	431	12/17/86	
Carbon Black Manufacturing	458	1/9/78	
Cement Manufacturing	411	8/29/79	
Coal Mining	434	10/9/85	S 1995
Coil Coating	465	8/24/84	
Canmaking Subcategory		4/10/84	
Copper Forming	468	6/20/86	
Dairy Products Processing	405	7/9/86	
Electroplating	413	9/4/84	
Electrical and Electronic Components	469	1/31/85	
Explosives Manufacturing	457	3/9/76	
Feedlots	412	2/11/75	
Ferroalloy Manufacturing	424	7/9/86	
Fertilizer Manufacturing	418	7/29/87	
Fruits and Vegetables Processing	407	7/9/86	
Glass Manufacturing	426	7/9/86	
Grain Mills	406	7/9/86	
Gum and Wood Chemicals	454	5/18/76	
Hospitals	460	5/6/76	
Ink Formulating	447	7/28/75	
Inorganic Chemicals	415	9/25/84	S 1994
Iron and Steel Manufacturing	420	5/17/84	S 1994
Leather Tanning and Finishing	425	3/21/88	S 1994
Meat Products	432	7/9/86	
Metal Finishing	433	11/7/86	S 1993
Metal Molding and Casting (Foundries)	464	6/16/86	
Mineral Mining and Processing	436	3/10/78	
Nonferrous Metals Forming	471	4/4/89	
Nonferrous Metals Manufacturing	421	1/21/88	
Oil and Gas Extraction	435	7/21/82	
Offshore Subcategory			P 3/13/91 [1]
Coastal Subcategory			P 1/95 [2]; F 7/96
Onshore/Stripper Subcategories			S 1996
Ore Mining and Dressing	440	5/24/88	
Organic Chemicals, Plastics and Synthetic Fibers	414	6/29/90	P 12/6/91 [3]; F 5/93
Paint Formulating	446	7/28/75	
Paving and Roofing Materials	443	7/24/75	
Pesticide Chemicals	455	9/29/78	
Manufacturing			P 4/10/92; F 7/93
Formulating/Packaging			P 1/94; F 8/95
Petroleum Refining	419	8/12/85	S 1993
Pharmaceutical Manufacturing	439	12/16/86	P 8/94 [4]; F 2/96
Phosphate Manufacturing	422	7/9/86	

APPENDIX A—PROMULGATED EFFLUENT GUIDELINES—Continued

["Promulgation" refers to the date of promulgation or the most recent amendment.]

Category	40 CFR part	Promulgation	Revised rule (P: proposal F: final action) or study completion (S)
Photographic Processing	459	7/14/76	
Plastics Molding and Forming	463	12/17/84	
Porcelain Enameling	466	9/6/85	
Pulp, Paper and Paperboard	430	12/17/86	P 10/93; F 9/95
Rubber Manufacturing	428	4/25/75	
Seafood Processing	408	7/9/86	
Soap and Detergent Manufacturing	417	2/11/75	
Steam Electric Power Generating	423	7/8/83	
Sugar Processing	409	7/9/86	
Textile Mills	410	9/1/83	S 1996
Timber Products Processing	429	2/12/81	

Notes: [1] Extension of comment period 4/5/91; see Table 1, Note 1 in text of today's notice.
[2] Notice and request for comments 11/8/89.
[3] Extension of comment period 1/21/92.
[4] Proposed rule (withdrawn) 10/27/83.

APPENDIX B—NEW EFFLUENT GUIDELINE RULEMAKINGS

Category	Proposed	Final action
Waste Treatment,[1] Phase 1	4/94	1/96
Metal Products and Machinery,[2] Phase 1	11/94	5/96
Waste Treatment,[1] Phase 2	1995	1997
Industrial Laundries	1996	1998
Transportation Equipment Cleaning	1996	1998
Metal Products and Machinery,[2] Phase 2	1997	1999
Eight additional categories to be determined (see text of today's notice)		

[1] Category formerly called "Hazardous Waste Treatment."
[2] Category formerly called "Machinery Manufacturing and Rebuilding."

APPENDIX C—COMPLETED PRELIMINARY STUDIES

[The following studies were published as Preliminary Data Summaries by EPA in 1989. Copies may be purchased from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161; telephone (703) 487-4650. Please specify the NTIS Accession Number(s) when ordering.]

Publication title	Current category name (if different from publication title)	NTIS accession No.
Preliminary Data Summary for the Drum Reconditioning Industry		PB90-126491
Preliminary Data Summary for the Hazardous Waste Treatment Industry	Waste Treatment	PB90-126517
Preliminary Data Summary for the Hospitals Point Source Category		PB90-126459
Preliminary Data Summary for Industrial Laundries		PB90-126541
Preliminary Data Summary for the Machinery Manufacturing and Rebuilding Industry.	Metal Products and Machinery	PB90-126525
Preliminary Data Summary for the Paint Formulating Point Source Category		PB90-126475
Preliminary Data Summary for the Pharmaceutical Manufacturing Point Source Category.		PB90-126533
Preliminary Data Summary for the Solvent Recycling Industry		PB90-126467
Preliminary Data Summary for the Transportation Equipment Cleaning Industry		PB90-126483
Preliminary Data Summary for the Used Oil Reclamation and Re-Refining Industry.		PB90-126509

APPENDIX D—NEW PRELIMINARY STUDIES

[EPA has tentatively identified the following industries for Preliminary Studies. Findings will be published as Preliminary Data Summaries and discussed in future Effluent Guidelines Plans.]

Category	40 CFR part	Start	Complete
Petroleum Refining	419	1992	1993
Metal Finishing	433	1992	1993
Iron & Steel	420	1993	1994
Inorganic Chemicals	415	1993	1994
Leather Tanning	425	1994	1995
Coal Mining	434	1994	1995
Onshore/Stripper Oil & Gas	435	1995	1996
Textile Mills	410	1995	1996
3 additional categories		1996	1997